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patent attorneys

April 17, 2006



Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Re: U.S. Patent Application Serial No. 09/649,461 for METHODS AND SYSTEMS
FOR GENERATING AND SENDING MESSAGES IN A MOBILE
COMMUNICATIONS NETWORK IN RESPONSE TO A CHANGE IN
LOCATION OF A SUBSCRIBER
Our Ref. No. 1322/51

Sir:

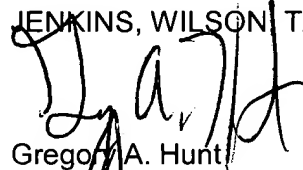
Please find enclosed the following:

1. Reply Brief under 37 C.F.R. § 41.41 (16 pages);
2. Copy of Unacknowledged Form PTO SB/08B dated March 12, 2001;
3. Copies of References listed on Unacknowledged Form PTO SB/08B;
4. A return-receipt postcard to be returned to our offices with the U.S. Patent and Trademark Office date stamp thereon; and
5. A Certificate of Express Mail No.: ER530237980US.

Although it is believed that no fee is due, the Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. 50-0426.

Respectfully submitted,

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PATENT



Shaylor E. Dunn

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant : Allison et al.)
) Group Art Unit: 2681
Appln. No. : 09/649,461)
) Examiner: Sujatha R. Sharma
Filed : August 25, 2000)

For: : METHODS AND SYSTEMS FOR GENERATING AND SENDING
MESSAGES IN A MOBILE COMMUNICATIONS NETWORK IN
RESPONSE TO A CHANGE IN LOCATION OF A SUBSCRIBER

REPLY BRIEF UNDER 37 C.F.R. § 41.41

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants filed an Appeal Brief on January 31, 2005 appealing the final rejection of the claims. In response to the Appeal Brief, Appellants received an Examiner's Answer dated April 19, 2005. In response to the Examiner's Answer, Appellants filed a Reply Brief on June 20, 2005. Appellants received an Official Action dated July 18, 2005 indicating that the Reply Brief had been entered and considered and that the application had been forwarded to the Board of Patent Appeals and Interferences.

Appellants received an order dated November 7, 2005 from the Board of Patent Appeals and Interferences indicating that the application was being returned to the Examiner for consideration of Information Disclosure Statements dated March 12, 2001

and July 24, 2003. Appellants received an Examiner's Answer dated February 17, 2006 along with PTO Forms SB/08A and SB/08B indicating consideration of documents cited in Information Disclosure Statements filed by Appellants. However, Appellants note that one of the forms SB/08B, a copy of which is attached hereto, fails to indicate the Examiner's consideration of the references listed on the form. Appellants respectfully submit that the Information Disclosure Statement with which the form was submitted complied with the requirements of 37 C.F.R. § 1.97 and 1.98. Accordingly, Appellants respectfully request acknowledgement of the Examiner's consideration of these references. For the Examiner's convenience, copies of the non-patent publications listed on the unacknowledged form SB/08B are attached hereto.

Appellants submit the following remarks in response to the Examiner's Answer dated February 17, 2006.

I. Response to Examiner's Statement of Grounds for Rejection

The grounds for rejection in section 8 of the Examiner's Answer and the reasoning for rejecting the claims are identical to the grounds and the reasoning in the final Official Action dated March 30, 2004 and in the first Examiner's Answer dated April 19, 2005. No new grounds of rejection have been presented. Accordingly, Appellants respectfully submit that the Appeal should be maintained and the claims are patentable over the references cited in the Official Action for the reasons stated in the Appeal Brief and in the first Reply Brief dated June 20, 2005.

II. Response to Examiner's Arguments

A. Response to Examiner's Arguments with Regard to Rejection of claims 1, 2-4, 7, 8, 12-17, 20, 21, 25-27, 32, 34-36, 39, 40, 45-49 and 55-69 under 35 U.S.C. § 102(b) as anticipated by Sladek.

i. Response to Examiner's Arguments for Independent Claim 1

On pages 10 and 11 of the Examiner's Answer, the Examiner argues that Sladek discloses the screening, correlating, sending a change in location indication to an SMSC, generating and sending an SMS message automatically to a subscriber in response to a change in location of the subscriber as claimed in claim 1. In particular, the Examiner concludes, "Therefore the network element MSC in the serving system is screening and correlating signaling messages transmitted between HLR and VLR." (Examiner's Answer, p. 11, lines 17-18). The Examiner cites column 14, lines 28-30 and Column 15, lines 6-50 of Sladek in support of this contention.

As a preliminary matter, the MSC in the serving system cannot be a network element that screens and correlates signaling messages transmitted between an HLR and a VLR because the MSC is not in the communication path between the HLR and the VLR. For example, even though an MSC and a VLR can be co-located with each other, they perform separate functions. An MSC performs media connection switching and signaling functions for setting up calls to mobile handsets. A VLR communicates with an HLR to notify the HLR when a subscriber enters the service area of a VLR. When a subscriber enters the service area of a VLR, the subscriber registers with the VLR. The VLR must then notify the subscriber's HLR that the subscriber is registered to

receive calls at the MSC that is co-located with the VLR. The signaling between the HLR and the VLR does not involve the MSC. The MSC is upstream from signaling originating from the VLR relating to registration and therefore does not receive or process the VLR-originated signaling. The MSC likewise does not receive or process signaling from the HLR relating to the registration because such signaling is terminated by the VLR. Thus, because MSCs and VLRs perform different functions and because an MSC is not in the communication path for signaling between a VLR and a HLR, the Examiner's conclusion that the MSC of Sladek discloses a telecommunications network element that screens and correlates messages transmitted between an HLR and a VLR is incorrect.

Column 14, lines 28-30 and column 15, lines 6-50 of Sladek cited by the Examiner likewise fail to indicate that the MSC of Sladek is a telecommunications network element that screens and correlates messages transmitted between an HLR and a VLR relating to change in location of a subscriber. Column 14, lines 28-30 of Sladek merely state that VLR **142** is usually part of MSC **118**, but the two can instead be separate entities. Column 15, lines 6-50 of Sladek disclose the registration notification (REGNOT), location request (LOCREQ), qualification request (QUALREC), and qualification directive (QUALDIR) procedures that are performed when a subscriber registers with a serving system and the subscriber's location is communicated to a HLR. As stated above, MSCs perform signaling and switching functions relating to setting up bearer channels to subscribers. VLRs communicate with HLRs to register subscribers when the subscribers enter service areas of the VLRs. Because the MSC is not in the communications path between the HLR and the VLR, the MSC cannot be a

telecommunications network element that screens and correlates messages transmitted between an HLR and a VLR as claimed. Accordingly, for this reason alone, the rejection of claim 1 should be reversed.

Further with regard to the rejection of claim 1, the Examiner states:

Further, Sladek reference [sic] teaches a method for sending and receiving messages. See col. 16, lines 26-29. Sladek also teaches the use of MSC. Therefore, MSC is being read as SMSC. (See page 11, lines 19-20 of Examiner's Answer.)

The Examiner's reasoning is flawed. Column 16, lines 26-29 of Sladek cited in the above-quoted passage from the Examiner's Answer state as follows:

"SMS_OriginationRestrictions" and "SMS_TerminationRestrictions", which define the type of short text messages that the subscriber is allowed to send or receive.

This portion of Sladek relates to a restriction on SMS messages that is stored in the subscriber's HLR. As is known to those of skill in the art, the term "MSC" stands for mobile switching center. A mobile switching center is a bearer channel switching office in a wireless communications network. In contrast, an SMSC or short message service center as recited in step (e) of claim 1 is a store and forward network element that stores text messages and forwards the text messages to MSCs for delivery. MSCs and SMSCs are different network elements with different functions. Nothing in Sladek teaches otherwise. Accordingly, for this additional reason, the rejection of claim 1 as anticipated by Sladek should be reversed.

On page 12 of the Examiner's Answer, the Examiner again argues that column 16, lines 26-29 of Sladek disclose a method of generating and sending SMS messages to a subscriber. Appellants respectfully disagree. As stated above, column 16, lines

26-29 of Sladek describe a restriction on placed on a subscriber's SMS capabilities. In particular, the SMS_OriginationRestrictions and SMS_TerminationRestrictions are limits types of text messages that the subscriber is allowed to send or receive. Nothing about the description of these restrictions teaches or even remotely suggests automatically generating and sending an SMS message to a subscriber as claimed.

The Examiner further argues that column 15, lines 6-40 of Sladek discloses automatically sending an SMS message to the subscriber once the subscriber's location is known. Column 15, lines 6-40 of Sladek describe signaling between an HLR and a VLR relating to registration. There is no mention of an SMSC or any SMS messages in column 15, lines 6-40 of Sladek. The only messages mentioned are those that are related to notifying the subscriber's HLR of the subscriber's location and notifying the serving system of the subscriber's profile. Accordingly, for this additional reason, the rejection of claim 1 as anticipated by Sladek should be reversed.

ii. Response to Examiner's Arguments for Dependent Claims 2, 4-7, 8, 12, 13, 60, and 64

On page 12 of the Examiner's Answer, the Examiner reiterates the argument from page 11 of the Examiner's Answer indicating that the MSC of the serving system of Sladek performs the method steps of claim 1. For the reasons stated above in response to the Examiner's arguments for claim 1, it is respectfully submitted that the rejection of dependant claims 2, 4-7, 8, 12, 13, 60, and 64 should be reversed.

In addition, in the Appeal Brief, the patentability of claims 60 and 64 was argued separately from that of claim 1 from which these claims depend. In particular, it was separately argued that claim 60 recites that the telecommunications network element

comprises a signal transfer point. The Examiner's Answer fails to address Appellants' arguments with regard to claim 60 or claim 64. Regarding claim 60, as stated in the Appeal Brief, the only function performed by the signal transfer point of Sladek is routing signaling messages (See column 14, lines 2-5 of Sladek.) Thus, even assuming for the sake of argument that the MSC of Sladek performs the functions recited by the Examiner in the Examiner's Answer, there is no teaching or suggestion in Sladek of performing any such functions at a signal transfer point. Accordingly, for this additional reason, the rejection of claim 60 as anticipated by Sladek should be reversed.

With regard to claim 64, claim 64 recites correlating a MAP update location request, a MAP update location response, and a MAP insert subscriber data message. As stated in the Appeal Brief, the Examiner's rejection of this claim relies on the portion of Sladek that discusses the REGNOT and LOCREQ messages. The REGNOT and LOCREQ messages transmitted between the serving system and HLR of Sladek cannot anticipate claim 64 because the REGNOT and LOCREQ messages are different messages from those recited in claim 64 and because Sladek fails to disclose any message correlation. Sladek fails to teach message correlation, not to mention correlating these specific messages. Accordingly, for the same reasons stated in the Appeal Brief, the rejection of claim 64 as anticipated by Sladek should be reversed.

iii. Response to Examiner's Arguments for Independent Claim 14

On page 13, in the Examiner's Answer, the Examiner indicates that the response to arguments for claim 1 apply to claim 14. Appellants respectfully note that claims 1 and claim 14 were argued separately in the Appeal Brief. Accordingly, the Examiner's

Answer fails to address Appellants' arguments with regard to the claim 14 in the Appeal Brief that are different from those made with respect to claim 1.

In particular, Appellants note that claim 14 contains an element that is not present in claim 1 and that has not been addressed by the Examiner in any of the Official Actions or in the Examiner's Answer. For example, as stated on page 32 of the Appeal Brief, claim 14 recites combining parameters extracted from correlated mobile call signaling messages to generate an SMS message. In the Official Action dated March 30, 2004, the Examiner fails to indicate any portion of Sladek that discloses combining parameters extracted from mobile call signaling messages. Accordingly, for this reason alone, the rejection of claim 14 as anticipated by Sladek should be reversed. In addition as stated above with regard to claim 1, Sladek fails to disclose any message correlation, not to mention using correlated parameters to generate an SMS message. Accordingly, this reason and those recited in the Appeal Brief, the rejection of claim 14 as anticipated by Sladek should be reversed.

iv. Response to Examiner's Arguments for Dependent Claims 15-25, 61, and 65

On page 13 of the Examiner's Answer, the Examiner indicates that the features of these claims are similar to claims 2, 4-7, 12, 13, 60, and 64 and indicates that the arguments for claims 2, 4-7, 8, 12, 60, and 64 apply to these claims as well. Appellants reiterate the arguments made in the Appeal Brief and the response above with regard to claim 1. In addition, Appellants respectfully note that claim 61, which recites that the telecommunications network is a signal transfer point, and claim 65, which recites the

specific MAP signaling messages that are correlated, are separately patentable over Sladek for the reasons stated in the Appeal Brief.

v. Response to Examiner's Arguments for Independent Claim 26

On page 13 of the Examiner's Answer, the Examiner indicates that independent claim 26 is similar to independent claim 1 and reiterates the arguments in the Examiner's Answer for independent claim 1.

Appellants respectfully reiterate the arguments made with regard to patentability of claim 26 in the Appeal Brief and the arguments stated above with regard to claim 1. In addition, Appellants note that claim 26 recites generating mobile call location update records based on the correlated mobile call signaling messages, which is not recited in independent claim 1. The Examiner's Answer fails to address how Sladek teaches generating mobile call location update records based on correlated signaling messages transmitted between an HLR and a VLR. The Examiner's arguments with regard to claim 1 merely refer to portions of Sladek that discuss standard mobile terminal registration and location management procedures performed by a serving system and an HLR. There is absolutely no teaching or suggestion in Sladek of generating mobile call location update records based on correlated mobile call signaling messages as claimed in claim 26. Accordingly, it is respectfully submitted that the rejection of independent claim 26 should be reversed.

vi. Response to Examiner's Arguments for Dependent Claims 27, 32, 62, and 66

On page 14, the Examiner's Answer indicates that the features of these claims are similar to claims 2, 4-7, 8, 12, 13, 60, and 64. Appellants respectfully reiterate the arguments made herein and in the Appeal Brief for these claims. In addition, the Examiner's Answer fails to consider Appellants' separate arguments made with regard to claim 62 and 66. Claim 62 recites that the telecommunications network element is an STP. As stated above, the only function performed by the STP of Sladek is routing. The Examiner's Answer fails to indicate how the STP of Sladek would perform the functions recited in claim 62.

With regard to claim 66, this claim recites specific messages that are correlated, including a MAP location request message, a MAP insert subscriber data message, and a MAP update location response message. Sladek does not disclose correlating any messages, not to mention correlating the specific messages recited in claim 66. Accordingly, it is respectfully submitted that the rejection of claim 66 should be reversed for this additional reason.

vii. Response to Examiner's Arguments for Independent Claim 34

On page 14 of the Examiner's Answer, the Examiner indicates that the features of independent claim 34 are similar to independent claim 1, and hence that the arguments for claim 1 apply. Appellants respectfully reiterate their response to the Examiner's arguments with regard to claim 1 made above and the arguments made with respect to claim 34 in the Appeal Brief. In addition, Appellants note that independent claim 34 recites a telecommunications network element, a message processing

platform, and a short message service center. The only elements discussed in the portion of Sladek relied upon by the Examiner are the MSC/VLR of the serving system and the subscriber's home HLR. There is no mention of a telecommunications network element that receives and screens mobile call signaling messages, a message processing platform that correlates mobile call signaling messages, or a short message service center that automatically sends a message to a subscriber in response to a change in location of a subscriber. As stated above with regard to the Examiner's arguments for claim 1, the MSC of Sladek is not an SMSC, the MSC does not perform message correlation, and the MSC cannot screen messages transmitted between the HLR and the VLR because the MSC is outside of the communication path between the HLR and the VLR. Accordingly, for these reasons, it is respectfully submitted that the rejection of independent claim 34 as anticipated by Sladek should be reversed.

viii. Response to Examiner's Arguments for Dependent Claims 35, 36, 39, 44, and 67

On page 14 of the Examiner's Answer, the Examiner indicates that the features of these claims are similar to claims 2, 4-7, 8, 12, 13, 60, and 64. The Examiner further indicates that the arguments in the Examiner's Answer with regard to claim 1 apply to these claims as well. Appellants respectfully reiterate their arguments made above with regard to independent claim 1. In addition, Appellants note that claim 67 was argued separately from claim 1 in the Appeal Brief. The Examiner's Answer fails to indicate how Sladek discloses correlating the specific sequences of messages as recited by claim 67. Accordingly, the rejection of this claim as anticipated by Sladek should be reversed.

ix. Response to Examiner's Arguments for Independent Claim 45

On page 14, the Examiner's Answer indicates that the features of independent claim 45 are similar to claim 1 and that the Examiner's arguments for claim 1 apply equally to claim 45. Appellants respectfully reiterate the arguments made above with regard to claim 1 and the arguments made in the Appeal Brief. Accordingly, for these reasons, it is respectfully submitted that the rejection of independent claim 45 should be reversed.

x. Response to Examiner's Arguments for Dependent Claims 46-49, 55, 56, and 68

On page 15 of the Examiner's Answer, the Examiner indicates that these claims contain features similar to claims 2, 4-7, 8, 12, 13, and 64 and reiterates the arguments for dependent claims 2, 4-7, 8, 12, 13, 60, and 64. In response, Appellants respectfully reiterate the arguments made above with regard to claim 1 and with regard to these claims in the Appeal Brief. In addition, the Examiner's Answer fails to address Appellant's separate arguments made with regard to claim 68. Thus, for these reasons, it is respectfully requested that the rejection of these claims should be reversed.

xi. Response to Examiner's Arguments for Independent Claim 57

On page 5, the Examiner's Answer indicates that the features of independent claim 57 are similar to independent claim 1. Hence, the Examiner reiterates the arguments made in the Examiner's Answer with regard to claim 1. Appellants respectfully reiterate the arguments made herein with regard to claim 1 and the arguments made in the Appeal Brief with regard to independent claim 57. Accordingly,

for these reasons, it is respectfully submitted that the rejection of claim 57 as anticipated by Sladek should be reversed.

xii. Response to Examiner's Arguments for Dependent Claims 58, 59, 63, and 69

On page 5, the Examiner's Answer indicates that the features of these claims are similar to independent claim 1 and reiterates the arguments made in the Examiner's Answer with regard to independent claim 1. Appellants respectfully reiterate the arguments made above with regard to claim 1 and the arguments made in the Appeal Brief with regard to these claims. In addition, in the Appeal Brief, claim 63, which recites that the telecommunications network element that screens the mobile call signaling messages is signal transfer point, and claim 69, which recites the specific sequence of messages, have not been addressed in the Examiner's Answer. Accordingly, for these reasons, it is respectfully submitted that the rejection of these claims as anticipated by Sladek should be reversed.

B. Response to Examiner's Arguments with Regard to Rejection of Claims 5, 6, 9, 11, 18, 22, 24, 41-44, 53, and 54 under 35 U.S.C. § 103(a) as unpatentable over Sladek in view of Baker

On page 15 of the Examiner's Answer, it was indicated that these claims depend from claims 1, 14, and 45, and that the Examiner's arguments with regard to claims 1, 14, and 45 apply to these claims as well.

Appellants respectfully reiterate the arguments made herein with regard to claims 1, 14, and 45 above and the arguments made in the Appeal Brief. In addition,

Appellants note that the Examiner's Answer fails to address any of Appellants' arguments with regard to Baker or the combination of Sladek and Baker. For example, as stated in the Appeal Brief, Sladek fails to teach automatically generating or sending an SMS message in response to change in location of a subscriber. Baker requires that a subscriber dial a predefined, advertised number in order to receive messages from WSN 301. Requiring the subscriber to dial a number to receive an SMS message is the opposite of automatic SMS message generation as claimed. There is no mention in either reference of message screening or automatic SMS message generation as claimed. Thus, for these reasons, it is respectfully submitted that the rejection of these claims as unpatentable over Sladek in view of Baker should be reversed.

C. Response to Examiner's Arguments with Regard to Rejection of Claims 10, 23, and 28-31 under 35 U.S.C. § 103 as unpatentable over Sladek in view of Jung

On page 16 of the Examiner's Answer, it is indicated that these claims depend from claims 1, 14, and 26, and hence the arguments in the Examiner's Answer with regard to claims 1, 14, and 26 apply. Appellants respectfully reiterate the arguments made herein with regard to claim 1 and those made in the Appeal Brief with regard to claims 10, 23, and 28-31 as unpatentable over Sladek in view of Jung. In addition, Appellants note that the Examiner's Answer fails to address any of Appellants' arguments made with regard to Jung. In particular, the Appeal Brief states that Jung fails to disclose screening messages relating to changes in location of subscribers, correlating such messages, or performing any actions at a telecommunications network element. Rather than screening messages relating to changes in location of subscriber,

Jung teaches that all transactions received by protocol monitors **18** and **19** are recorded. In addition, rather than performing steps at a telecommunications network element, Jung teaches that protocol monitors **18** and **19** in computer **21** are independent of the mobile communications network. Thus, for these reasons, it is respectfully submitted that the rejection of these claims as unpatentable over Sladek in view of Jung should be reversed.

D. Response to Examiner's Arguments with Regard to Rejection of Claim 33 under 35 U.S.C. § 103(a) as unpatentable over Sladek in view of Brown

On page 16 of the Examiner's Answer, it was indicated that this claim depends from claim 26 and that the arguments made in the Examiner's Answer with regard to claim 26 apply. Appellants respectfully reiterate their arguments made herein with regard to claim 1 and with regard to claim 26 in the Appeal Brief. In addition, Appellants respectfully note that the Examiner's Answer fails to address any of Appellants' arguments made with regard to Brown or the combination of Sladek and Brown. In particular, it is noted that Brown relates to collecting location update messages for generating a network topology map. There is no disclosure of generating any individual subscriber records. Rather, Brown teaches developing a collective topology map from the location update messages of all subscribers. Accordingly, for these reasons, it is respectfully submitted that the rejection of claim 33 as unpatentable over Sladek in view of Brown should be reversed.

IV. Conclusion

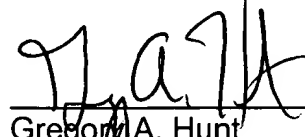
For the reasons stated above, it is respectfully submitted that the rejection of all of the pending claims should be reversed.

Respectfully submitted,

JENKINS, WILSON & TAYLOR, P.A.

Date: April 17, 2006

By: _____



Gregory A. Hunt

Registration No. 41,085

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1322/51 GAH/sed

Enclosures: Copy of Unacknowledged Form PTO SB/08B dated March 12, 2001
Copies of References listed on Unacknowledged Form PTO SB/08B